

DETAILED ACTION

Reopening of Prosecution

1. In view of the Appeal Brief filed on 11/15/07, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Patrick H. Mackey/

Supervisory Patent Examiner, Art Unit 3653

Claim Objections

2. Claim1 is objected to because of the following informalities:
3. In line 9, "a least one of" should be "at least one of" . Appropriate correction is required.

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4. In line 12, "connection said pivotal" should be "connection with said pivotal".

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-7, 13-18, 27, 28, 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Tanaka (US 6,283,267 B1) in view Chung (US 5,788,047).

Regarding Claims 1, 13, 27, 32 and 34, Tanaka discloses a coin separator and rejector body, as illustrated in figures 1-6, having two or more segments (23, 31) hinged together in pivotal connection, said hinged segments defining one or more downwardly inclined coin races formed between the hinged segments, as illustrated in figures 6 and 11 and mentioned at col. 4, lines 4-12, said rejector body having an upstream portion (left portion of figures 6 and 11) and a downstream portion (right portion of figures 6 and 11), said coin races further having a first wall and a second wall, at least a portion of one of said walls in pivotal connection with at least one of said hinged segments of said separator and rejector body. See Col. 3, line 58-col. 4, line 12.

Further regarding Claims 1, 13, 27, 32 and 34, Tanaka further discloses one or more sensors (S) located in said upstream portion of said rejector body and an actuator (61, 72) in mechanical connection with said pivotal connection with said pivotal portion of said race wall.

Regarding Claims 2 and 28, Tanaka further discloses a second sensor (S) located in said downstream portion of said rejector body. Note figuer 4, which illustrates a sensor (S) located in what can be construed as being located in an upstream portion of the of the body, with another sensor (S) being located further downstream.

Regarding Claims 4, 15, Tanaka further discloses that said actuator (61, 72) is a solenoid.

Regarding Claims 1, 13, 27, 32 and 34, Tanaka does not expressly disclose, but Chung discloses a programmed processor in electrical communication with said sensors and with said actuator pivoting said race wall from said closed position to said open position upon detection of a coin by said sensors See col. 3, lines 42-54, particularly, line 50, which states that a central processing unit (CPU) is used to effectuate element (41) based upon detection of the oscillator sensors (20).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have used a programmed processor, as taught by Chung, to control the opening and closing of Tanaka's rejector body half based upon output from Tanaka's sensors (S) since one ordinarily skilled would have recognized from Tanaka's disclosure that Chung's CPU would efficiently and accurately control the opening and closing of Takaka's rejector body half.

Further regarding Claim 32, note that Chung discloses that coin jamming is a problem in coin rejector bodies at col. 1, lines 36-46.

Further regarding Claim 32, official notice is taken that it would have been obvious to one of ordinary skill in the art to have caused the rejector body halves of

Tanaka to part if a predetermined time period is exceeded since sensing the first coins without the coins passing a second sensor.

However, note also that section “e” of Claim 32 states “said programmed processor to receive a signal from said second sensor within a predetermined time period **upon** detection of an object by said first sensor...” Emphasis provided. This passage indicates that operation of the processor is conditional and that if a coin never passes the first sensor, the condition will never be met. Therefore, the combination of Tanaka and Chung, as outlined above, is construed as meeting the limitations of this claim.

Regarding Claims 7, 18, Chung further discloses that at least one of said sensors are induction coils, as illustrated in figure 4 and col. 3, lines 42-54. It would have been obvious to make Tanaka’s sensors induction coils for the purpose of determining coin thickness, material composition and diameter, as is well-known in the art.

Regarding Claims 3, 14, official notice is taken that it would have been obvious to substitute an electric motor for Tanaka’s solenoid for the purpose of decreasing cost and/or increasing accuracy.

Regarding Claims 5, 16, official notice is taken that it would have been obvious to substitute a latching solenoid for Tanaka’s solenoid for the purpose of remaking a circuit when the circuit is re-energized.

Regarding Claims 6, 17, official notice is taken that it would have been obvious to substitute a wound cap solenoid for Tanaka's solenoid for the purpose of reducing costs.

4. Claims 8-11 and 19-22 rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (US 6,283,267 B1) in view Chung (US 5,788,047) and further in view of Neathway et al (US 6,227,343 B1). Tanaka discloses the coin rejection system as described above.

Tanaka does not expressly disclose, but Neathway discloses the following.

As described in Claims 8-11 and 19-22;

- a. one of said sensors is a Hall effect sensor;
- b. one of said sensors is a photoelectric sensor;
- c. one of said sensors is an LED sensor;
- d. one of said sensors is an IR sensor;

See Neathway, col. 1, lines 58-64, col. 2, lines 3-9 and col. 4, lines 17-30.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have used Hall effect, photoelectric, LED or IR sensors in the coin raceway of Tanaka.

The suggestion/motivation would have been to detect if the coin is made of ferrous metal by using a Hall effect sensor and to use an infrared/LED/photo diode system to detect coin diameter. See Chung, col. 1, lines 58-64.

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5. Claims 12 and 23, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (US 6,283,267 B1) in view Chung (US 5,788,047) and further in view of Mercurio (US 5,007,519).

Tanaka discloses the system described above.

Tanaka does not expressly disclose, but Mercurio discloses the following.

As described in Claims, 12, 23, 29 and 30;

e. a light coin spring detector (70) positioned in the downstream portion of said rejector body (see col. 3, lines 48-68 and col. 4, lines 1-4 of Mercurio);

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have added a light coin spring detector in the downstream passageway of the rejector body of Tanaka.

The suggestion/motivation would have been to provide a further layer of security to insure correctly weighted coins are allowed to pass through to the coin box. See Mercurio, abstract, last 7 lines, in particular.

6. Claims 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (US 6,283,267 B1) in view Chung (US 5,788,047) and further in view of Fougere (US 3,792,766).

Tanaka discloses the system described above.

Tanaka does not expressly disclose, but Fougere discloses the following.

As described in Claims 31 and 33;

- f. a magnet (32) mounted adjacent said coin race in the upstream portion of said separator and rejector body;

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have added a movable magnet in the downstream passageway of the rejector body of Tanaka

The suggestion/motivation would have been to provide a further layer of security to insure that coins having a "magnetic permeability to density ratio in excess of a predetermined value" are eliminated from the raceway. See Fougere, abstract.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY A. SHAPIRO whose telephone number is (571)272-6943. The examiner can normally be reached on Monday-Friday, 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick H. Mackey can be reached on (571)272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey A. Shapiro/
Primary Examiner, Art Unit 3653

/Patrick H. Mackey/
Supervisory Patent Examiner, Art Unit 3653

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